

COMBINING GRANT, ACKNOWLEDGEMENT, AND RATE CONTROL COMMANDS

ABSTRACT

Embodiments disclosed herein address the need in the art for reduced overhead control with the ability to adjust transmission rates as necessary. In one aspect, a first signal indicates an acknowledgement of a decoded subpacket and whether or not a rate control command is generated, and a second signal conditionally indicates the rate control command when one is generated. In another aspect, a grant may be generated concurrently with the acknowledgement. In yet another aspect, a mobile station monitors the first signal, conditionally monitors the second signal as indicated by the first signal, and may monitor a third signal comprising a grant. In yet another aspect, one or more base stations transmit one or more of the various signals. Various other aspects are also presented. These aspects have the benefit of providing the flexibility of grant-based control while utilizing lower overhead when rate control commands are used, thus increasing system utilization, increasing capacity and throughput.